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PROCESS AND DEVICE FOR ESTIMATING THE SUCCESSIVE VALUES OF DIGITAL SYMBOLS, IN PARTICULAR FOR THE EQUALIZATION OF AN INFORMATION TRANSMISSION CHANNEL IN MOBILE TELEPHONY

## Abstract of the Disclosure

A process for estimating [[The]] successive values of [[the]] digital symbols which can each take M different possible values, are estimated on the basis of the successive values of digital samples each of which results from the combination of at most L successive symbols. This estimation process includes a stage by stage progression through a trellis of the Viterbi type with  $M^k$  states, with k being less than or equal to L-1. All the ~~states of all the stages~~ are respectively provided with aggregate metrics. When taking into account the sample of rank n, all the transitions arriving at the various ~~states of the current stage of the trellis~~ are partitioned into M groups, each group containing all the transitions arising from the states of the preceding stage which are associated with one of the M possible values of the symbol of rank n-k. The various aggregate metrics are calculated for these various states of the current stage of the trellis. One of the transitions which leads to the state provided with a extremum aggregate metric is determined in each group. A unique decision is taken regarding the value of the symbol of rank n-k by detecting the group associated with the extremum of these M extremum aggregate metrics. This unique decision is provided with a symbol confidence index formulated from these M extremum aggregate metrics.